

Amendments to the Specification:

Please add the following new paragraph after the Title and before the first paragraph on page 1:

THIS APPLICATION IS A U.S. NATIONAL PHASE APPLICATION OF PCT INTERNATIONAL APPLICATION PCT/GB2004/005060.

Please replace paragraph on page 9, beginning at line 26 with the following paragraph:

Figure 4 shows the relationship between the nozzle ~~129~~ from which the impinging jet emanates and the sensor ~~2221~~.

Please replace paragraph on page 10, beginning at line 15 with the following paragraph:

Figure 1 shows an electrochemical sensor setup comprising an electrochemical cell rig. 3, having the following components. The electrochemical cell rig 3 comprises a sensor (working electrode) 21 positioned proximate and normal to the nozzle 9 through which a fluid jet (also known as an impinging jet) exits from the nozzle 9. In addition, the cell rig 18 provides support for a reference electrode (silver-silver electrode) 19 and a counting electrode 23 made of platinum, in this example.

Please replace paragraph on page 10, beginning at line 25 with the following paragraph:

The fluid control means consists of a pump 15 positioned ~~downstream~~upstream of a needle valve 13 which is used to control the flow level of the impinging jet fluid. A flow meter 7 is used to measure the amount of flow of the impinging jet fluid so as to allow calculation of the Reynolds number of the jet fluid. A nozzle 9 provides the means by which the impinging jet fluid exits the fluid control means 5 and contacts the working electrode 21. In this example, a solution tank is provided for storage and circulation of the impinging jet fluid.

Please replace paragraph on page 13, beginning at line 11 with the following paragraph:

Figure 4 shows the relationship between the nozzle ~~129~~ from which the impinging jet emanates and the sensor ~~2221~~. The nozzle has an inner diameter d 14 and the nozzle is placed at a distance H 16 from the sensor ~~2221~~. Laminar flow of the surface impinging jet occurs where:

Please replace paragraph on page 15, beginning at line 22 with the following paragraph:

Figure 7 shows a further embodiment of the present invention similar to that shown in Figure ~~75~~. Figure 7 is an embodiment of the invention in which a pre-prepared solution is used

when measuring the scale coverage of a working electrode. The sensor arrangement 51 has two fluid flow paths 53 and 55.

Please replace paragraph on page 15, beginning at line 29 with the following paragraph:

Flow path 53 is similar to the flow path shown in Figure 75 and allows a fluid sample to be taken from a pipe 57 and fed through an electrochemical cell 61 via a conduit 59. Flow path 55 includes a solution tank 63 and a pump 69 which allow the supply of a pre-prepared electrolyte (brine in this example) to the electrochemical cell rig. It has been found that the use of this electrolyte allows a more accurate measure of the scale coverage to be achieved as the electrolyte is pre-prepared and substantially free from the contaminants that are often found in the bulk fluid contained in the pipeline 57.